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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/569,209

02/23/2006

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EXAMINER

CHU, KIM KWOK

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/569,209	Applicant(s) YAMADA ET AL.	
	Examiner KIM CHU	Art Unit 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Pre-Amendment filed on 2/23/2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☒ Claim(s) 18-22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 February 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

(a) in Claim 1, line 3, the term "adjusting a surrounding" is not clear because the nature of the surrounding, for example, pressure, temperature, stability etc., is not specified in the claim;

(b) furthermore, in Claim 1, line 4, the term "predetermined environmental condition" is not clear because the nature of the environmental condition, for example, pressure, temperature, stability etc., is not specified in the claim; and

(c) similarly, in Claim 8, line 4, the term "predetermined environmental condition" is not clear because the nature of the environmental condition, for example, pressure, temperature, stability etc., is not specified in the claim.

The claims not specifically mentioned above are indefinite based upon their dependence of an indefinite Claim.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-17 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Nakamura et al. (U.S. Patent 6,157,600) in view of Ohmori et al. (U.S. Patent 5,182,742) and further in view of Branc et al. (U.S. Patent 4,831,476).

5. Nakamura teaches a warpage (Fig. 6; column 13, lines 8 and 9) angle measurement apparatus very similar to that of the present invention as in the Claims 1-7. For example, Nakamura teaches the following:

(a) with respect to Claim 1, an optical disc 101 (Fig. 1), a laser transmitter oscillator LD (Fig. 6) for causing laser oscillation to emit laser light to the disc to be measured (Fig. 6; column 13, lines 6-15); and a light-receiving unit 100 (Fig. 1) for receiving the laser light reflected from the disc to be measured and detecting a relative angle of an optical path of

Art Unit: 2627

the reflected laser light with respect to an optical path of the emitted laser light (Fig. 1; Figs. 6 and 7).

However, Nakamura does not teach the following:

(a) with respect to Claim 1, a constant temperature chamber for accommodating at least one of the optical disc 101 and a cartridge for the optical disc 101 as an object to be measured and adjusting a surrounding of the object to be measured to have a predetermined environmental condition.

Ohmori et al. teaches a disc drive having the following features:

(a) an optical disc and a cartridge for the optical disc as an object to be measured (Figs. 1 and 2; column 2, lines 40-44).

Branc teaches a disc drive having the following features:

(a) a constant temperature chamber 10 for accommodating a disc drive 41 (Fig. 7; column 3, lines 63-65) as an object to be measured and adjusting a surrounding of the object to be measured to have a predetermined environmental condition (Fig. 4; column 7, lines 32-37).

To avoid dust, grease and scratch etc. from damaging the surface of an optical disc, the disc should not be exposed. Hence, to protect Nakamura's optical disc, it would have been obvious to one of ordinary skill in the art to utilize a

Art Unit: 2627

cartridge similar to Ohmori's as a covering means for Nakamura's disc, because the cartridge prevents direct contact of the disc. Furthermore, temperature variation such as excess heat also affects the quality of data recorded on the disc. For example, a constant temperature provided to the disc surrounding increases the reliability of recording/reading of the data recorded on the disc. Therefore, it would have been obvious to one of ordinary skill in the art to maintain the surrounding temperature of the cartridge containing a disc such as Nakamura in view of Ohmori to have a predetermined environmental condition such as Branc's, because the maintaining of the predetermined environmental condition such as a constant temperature provides an optimum recording/reading condition for Nakamura's disc measuring apparatus.

(b) with respect to Claim 2, Nakamura et al. (U.S. Patent 6,157,600) in view of Ohmori et al. (U.S. Patent 5,182,742) and further in view of Branc et al. (U.S. Patent 4,831,476), Nakamura further teaches an arithmetic unit 104 (Fig. 1) for calculating the relative angle of an optical path of the reflected laser light with respect to an optical path of the emitted laser light based on a position on the light-receiving unit at which the reflected laser light arrives (Fig. 26; column 25, lines 20-30).

Art Unit: 2627

(c) with respect to Claim 3, Nakamura et al. (U.S. Patent 6,157,600) in view of Ohmori et al. (U.S. Patent 5,182,742) and further in view of Branc et al. (U.S. Patent 4,831,476), Ohmori further teaches that the cartridge/chamber 2 has a through hole for allowing the laser light to pass therethrough, and the laser oscillator and the light-receiving unit are arranged outside the constant temperature cartridge/chamber 2 (Fig. 1).

(d) with respect to Claim 4, Nakamura et al. (U.S. Patent 6,157,600) in view of Ohmori et al. (U.S. Patent 5,182,742) and further in view of Branc et al. (U.S. Patent 4,831,476), Ohmori further teaches that the through hole (shutter) of the constant temperature chamber 2 is closed with a light-transmitting member (Fig. 2; a shutter 5 is a closed member means having an opening for the transmitted light).

(e) with respect to Claim 5, Nakamura et al. (U.S. Patent 6,157,600) in view of Ohmori et al. (U.S. Patent 5,182,742) and further in view of Branc et al. (U.S. Patent 4,831,476), Nakamura further teaches that the optical disc is mounted and adjusted in a mounting posture (Fig. 1; titling adjustment).

(f) with respect to Claims 6 and 7, Nakamura et al. (U.S. Patent 6,157,600) in view of Ohmori et al. (U.S. Patent 5,182,742) and further in view of Branc et al. (U.S. Patent 4,831,476), Nakamura further teaches that a rotating and driving

Art Unit: 2627

mechanism (spindle) for driving the optical disc to rotate (Fig. 5).

6. Method claims 8-17 are drawn to the method of using the corresponding apparatus claimed in claims 1-4 and 6. Therefore method claims 8-17 correspond to apparatus claims 1-4 and 6 and are rejected for the same reasons of obviousness as used above.

Allowable Subject Matter

7. Claims 18-22 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

8. The following is an Examiner's statement of reasons for the indication of allowable subject matter:

As in claims 18-22, the prior art of record fails to teach or fairly suggest a warpage angle measurement method having the following step:

(a) two constant temperature chambers are prepared and environmental conditions inside the two constant temperature chambers are set to have a different environmental condition from each other, and

Art Unit: 2627

(b) the object to be measured is first accommodated in one of the two constant temperature chambers and is then carried into the other constant temperature chamber and thereafter the angle of warpage of the object to be measured is measured.

The features indicated above, in combination with the other elements of the claims, are not anticipated by, nor made obvious over, the prior art of record.

Related Prior Art

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Iwazawa et al. (7,327,643) is pertinent because Iwazawa teaches a tilt compensating optical disc apparatus.

Shimizu et al. (6,208,601) is pertinent because Shimizu teaches a tilt compensating optical disc apparatus.

Art Unit: 2627

10. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Kim CHU whose telephone number is (571) 272-7585 between 9:30 am to 6:00 pm, Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Nguyen, can be reached on (571) 272-7579.

The fax number for the organization where this application or proceeding is assigned is (571) 273-8300

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished application is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9191 (toll free).

/Kim-Kwok CHU/

Examiner AU2627
June 23, 2008
(571) 272-7585

/HOA T NGUYEN/

Supervisory Patent Examiner, Art Unit 2627